MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

MCC1013 – COMPUTER MODELLING

(All Sections / Groups)

19 OCTOBER 2018
9.00 AM – 11.00 AM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages including the cover page.
2. Please answer only **FOUR** out of SEVEN questions. 10 marks is given for each question.
3. Please write all your answers in the Answer Booklet provided.

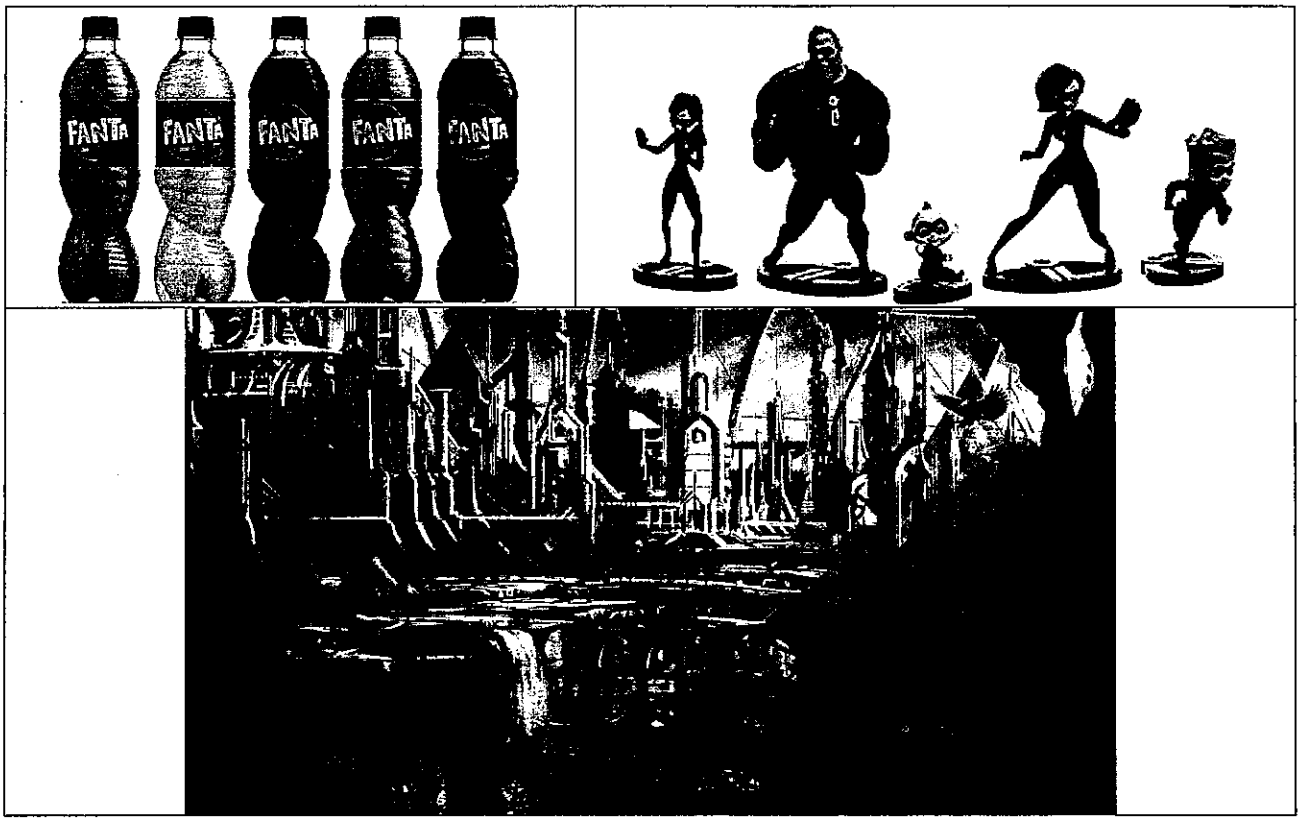
*Question number 1, 2, 3, 4, 5, 6 and 7are based on this statement below. Please answer **FOUR** questions ONLY.*

You work in a renowned advertising company. As an art director, you need to understand the whole process of 3D advertisement making starting from modelling an object/ character, texturing, lighting, animating, up to the rendering process.

The Problem

You are now working in a brand new '***Fanta***' TV commercial with a touch of futuristic and family scene. You have to direct and co-ordinate a team of designers, modellers and animators for this project. Your team has to create a beautiful 3D scene (as in the illustration) based on The Incredibles 2 characters. They have to build an entirely 3D environment with fully digital characters (FANTA bottles and The Incredible Family (your famous superheroes).

Here are the pictures of the characters (Fanta bottles and The Incredibles) as well as the environment.



Continued...

1. Before the creation of this advertisement takes place, all the advertising team members have to understand about the workflow of this 3D production. Please explain clearly the 3D production pipeline as you understand. (10 marks)

2. You can use any modeling techniques to suit your needs. There are many ways to model an object. Please explain what are 'Boolean' and 'Extrude' techniques and how to use these two techniques for modeling objects in your scene. (10 marks)

3. Lights in 3ds Max are object/sources that simulate real lights such as household or office lamps, light instruments used in stage and film work, or the sun itself. Different kinds of light objects cast light in different ways, emulating different kinds of real-world light sources. Please explain clearly what is
   - attenuation
   - reflected light and ambient light (10 marks)

4. There are 10 principles of photorealism. Please name ALL. (10 marks)

5. You will use a subdivision modelling technique to model the character (Fanta bottle and The Incredibles characters). Please explain what is subdivision modeling in detail. (10 marks)

6. You need to 'put' a lot of natural textures on your 3D models. Before you can explain it to your sub-ordinate, you need to understand the terms clearly. Please explain **FIVE** basic definitions in texture mapping. (10 marks)

7. You need to make dramatic light effects for this scene. Please explain in detail any **FIVE** kind of standard lights available in your 3D software to choose from. (10 marks)

End of Page.